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10/662,982

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12/13/2004

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EXAMINER

TSAI, CAROL S W

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,982

Applicant(s)

RAMIREZ, ANIBAL DIEGO

Examiner

Carol S Tsai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1/20/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1-16 are objected to because of the following informalities:

In claim 1, line 15, "operable to;" should read - - operable to: - -.

In claim 11, line 14, "the processing circuit operable to;" should read

- - the processing circuit operable to: - -.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 8-12, 14-17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 4,918,995 to Pearman et al.

With respect to claims 1-3 11, 12, 16, and 17, Pearman et al. disclose a metering arrangement, comprising: a meter housing securedly supported proximal to a facility receiving utility commodities (see col. 1, lines 46-52); a source of energy signals representative of electrical energy received by the facility (see Figs. 6 and 7; col. 6, lines 40-52; and col. 7, lines 26-40); a source of gas flow signals representative of gas flow through a gas conduit to the facility (see col. 3, lines 15-40); a source of temperature signals representative of a temperature corresponding to the gas conduit (see Fig. 4 and

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col. 4, line 67 to col. 5, line 32); a processing circuit (electronic circuits 16 shown on Fig. 6) disposed within the meter housing, the processing circuit operably connected to the source of energy signals to receive energy signals therefrom, the processing circuit operably connected to the source of gas flow signals to received gas flow signals therefrom, the processing circuit operably connected to the source of temperature signals to receive temperature signals therefrom, the processing circuit operable to; generate electrical energy consumption metering information from the energy signals; generate gas consumption information based on the received gas flow signals and the received temperature signals (see col. 4, line 67 to col. 5, line 32; col. 10, line 7 to col. 11, line 27; and col. 11, line 45 to col. 13, line 10).

As to claims 8 and 9, Pearman et al. disclose operable to obtain an uncorrected gas volume value from the received gas flow signals; obtain an average temperature value from the received temperature signals; and generate corrected gas flow information at least in part by multiplying the uncorrected gas volume value by a second value that is equal to the ratio of the reference temperature to the average temperature value (see col. 10, line 67 to col. 11, line 27).

As to claims 10 and 19, Pearman et al. also disclose operably connected to a source of pressure signals to receive pressure signals therefrom, the processing circuit further operable to generate corrected gas flow information based on the received gas flow signals, the received temperature signals and the received pressure signals (see col. 9, lines 42-45).

As to claims 14 and 15, Pearman et al. also disclose at least one current transformer being affixed to the housing (see col. 7, lines 3-25).

As to claim 20, Pearman et al. also disclose communicating the gas consumption information external to the meter housing (see Abstract, lines 8-11; col. 7, lines 13-25; and col. 8, line 67 to col. 9, line 8).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pearman et al. in view of U. S. Patent No. 5,343,758 to Ingrain et al.

As noted above, with respect to claims 4-7 and 13, Walter et al. disclose the claimed invention, except for a source of pulsed gas flow signals, each pulsed gas flow signal having a frequency that corresponds to a detected gas flow quantity.

Ingrain et al. teach a source of pulsed gas flow signals, each pulsed gas flow signal having a frequency that corresponds to a detected gas flow quantity (see Fig. 3; col. 2, line 62 to col. 3, line 2; col. 5, lines 53-68; and col. 7, lines 47-64).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Pearman et al.'s method to include a source of pulsed gas flow signals, each pulsed gas flow signal having a frequency that corresponds to a detected gas flow quantity, as taught by Ingrain et al., in order to determine parameters characteristic of the gas on the basis of said evaluation and on the basis of pressure,

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temperature, and flow measurements performed on the gas (see Ingrain et al. col. 2, lines 63-67).

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pearman et al. in view of U. S. Patent No. 4,829,449 to Polesnak.

As noted above, Pearman et al. disclose the claimed invention, except for employing a first routine in the processing circuit to accumulate gas consumption pulses; employing a second routine in the processing circuit to accumulate temperature pulses; employing a third routine in the processing circuit to generate gas consumption information based on the accumulated gas consumption pulses and the accumulated temperature pulses.

Polesnak teaches employing a first routine in the processing circuit to accumulate gas consumption pulses; employing a second routine in the processing circuit to accumulate temperature pulses; employing a third routine in the processing circuit to generate gas consumption information based on the accumulated gas consumption pulses and the accumulated temperature pulses (see col. 10, line 63 to col. 11, line 27 and col. 16, lines 20-36).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Pearman et al.'s method to include employing a first routine in the processing circuit to accumulate gas consumption pulses; employing a second routine in the processing circuit to accumulate temperature pulses; employing a third routine in the processing circuit to generate gas consumption information based on the accumulated gas consumption pulses and the accumulated temperature pulses, as

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taught by Polesnak, in order to provide corrected indications of gas flow at base conditions of temperature and pressure.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Belke et al. disclose an electronic flow measurement device (EFM), for use in conjunction with a flow meter in a pressurized gas line, having microprocessor and read-only memory (ROM), and calculating and recording gas flow rates corrected for variable factors such as gas pressure, temperature, and density.

Spended discloses a gas meter including a measuring tube through which gas to be supplied is fed.

Pearman et al. disclose a method and apparatus for proving an electronic gas meter and the like that includes counting the number of pulses provided by an encoder associated with a bell prover to define a volume of test fluid which is supplied to the meter under test, enabling the meter to measure the volumetric fluid flow rate and integrating the volumetric flow rate of test fluid measured by the gas meter during the test, and data representing the actual volume of test fluid supplied to the meter under test to determine the percent proof or accuracy of the meter.

Selph et al. disclose the utility meter being a microprocessor-based circuit using Hall effect electric current sensors to measure power usage by residential and commercial customers.

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Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. W. Tsai whose telephone number is (571) 272-2224. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax number for TC 2800 is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2800 receptionist whose telephone number is (571) 272-1585 or (571) 272-2800.

In order to reduce pendency and avoid potential delays, Group 2800 is encouraging FAXing of responses to Office actions directly into the Group at (703) 872-9306. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2800 will be promptly forwarded to the examiner.



Carol S. W. Tsai
Patent Examiner
Art Unit 2857

12/04/04